7590-01-P

NUCLEAR REGULATORY COMMISSION

10 CFR Part 72

[NRC-2022-0109]

RIN 3150-AK86

List of Approved Spent Fuel Storage Casks: Holtec International HI-STORM 100 Cask System, Certificate of Compliance No. 1014, Renewal of Initial Certificate and Amendment Nos. 1 Through 15

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is proposing to amend its spent fuel storage regulations by revising the Holtec International HI-STORM 100 Cask System listing within the "List of approved spent fuel storage casks" to renew, for 40 years, the initial certificate (Amendment 0) and Amendment Nos. 1 through 15 of Certificate of Compliance No. 1014. The renewal of the initial certificate and Amendment Nos. 1 through 15 would revise the certificate of compliance's conditions and technical specifications to address aging management activities related to the structures, systems, and components important to safety of the dry storage system to ensure that these will maintain their intended functions during the period of extended storage operations.

DATES: Submit comments by **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. Comments received after this date will be considered if it is practical to do so, but the NRC is able to ensure consideration only

for comments received on or before this date.

ADDRESSES: Submit your comments, identified by Docket ID NRC-2022-0109, at https://www.regulations.gov. If your material cannot be submitted using https://www.regulations.gov, call or email the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document for alternate instructions.

For additional direction on obtaining information and submitting comments, see "Obtaining Information and Submitting Comments" in the SUPPLEMENTARY INFORMATION section of this document.

FOR FURTHER INFORMATION CONTACT: Kristina Banovac, Office of Nuclear Material Safety and Safeguards; telephone: 301-415-7116, email: Kristina.Banovac@nrc.gov and James Firth, Office of Nuclear Material Safety and Safeguards, telephone: 301-415-6628, email: James.Firth@nrc.gov. Both are staff of the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

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I. Obtaining Information and Submitting Comments

A. Obtaining Information

Please refer to Docket ID NRC-2022-0109 when contacting the NRC about the availability of information for this action. You may obtain publicly available information related to this action by any of the following methods:

- **Federal Rulemaking Website:** Go to https://www.regulations.gov and search for Docket ID NRC-2022-0109. Address questions about NRC dockets to Dawn

Forder, telephone: 301-415-3407, email: Dawn.Forder@nrc.gov. For technical questions contact the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document.

- **NRC's Agencywide Documents Access and Management System (ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at https://www.nrc.gov/reading-rm/adams.html. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by email to pdr.resource@nrc.gov. For the convenience of the reader, instructions about obtaining materials referenced in this document are provided in the "Availability of Documents" section.
- **NRC's PDR:** You may examine and purchase copies of public documents, by appointment, at the NRC's PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to PDR.Resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

B. Submitting Comments

Please include Docket ID NRC-2022-0109 in your comment submission. The NRC requests that you submit comments through the Federal rulemaking website at https://www.regulations.gov. If your material cannot be submitted using https://www.regulations.gov, call or email the individuals listed in the FOR FURTHER INFORMATION CONTACT section of this document for alternate instructions.

The NRC cautions you not to include identifying or contact information that you do not want to be publicly disclosed in your comment submission. The NRC will post all comment submissions at https://www.regulations.gov as well as enter the comment

submissions into ADAMS. The NRC does not routinely edit comment submissions to remove identifying or contact information.

If you are requesting or aggregating comments from other persons for submission to the NRC, then you should inform those persons not to include identifying or contact information that they do not want to be publicly disclosed in their comment submission. Your request should state that the NRC does not routinely edit comment submissions to remove such information before making the comment submissions available to the public or entering the comment into ADAMS.

II. Rulemaking Procedure

Because the NRC considers this action to be non-controversial, the NRC is publishing this proposed rule concurrently with a direct final rule in the Rules and Regulations section of this issue of the *Federal Register*. The direct final rule will become effective on **[INSERT DATE 75 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**. However, if the NRC receives any significant adverse comment by **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**, then the NRC will publish a document that withdraws the direct final rule. If the direct final rule is withdrawn, the NRC will address the comments in a subsequent final rule or as otherwise appropriate. In general, absent significant modifications to the proposed revisions requiring republication, the NRC will not initiate a second comment period on this action in the event the direct final rule is withdrawn.

A significant adverse comment is a comment where the commenter explains why the rule would be inappropriate, including challenges to the rule's underlying premise or approach, or would be ineffective or unacceptable without a change. A comment is adverse and significant if:

1) The comment opposes the rule and provides a reason sufficient to require a substantive response in a notice-and-comment process. For example, a substantive response is required when:

a) The comment causes the NRC to reevaluate (or reconsider) its position or conduct additional analysis;

b) The comment raises an issue serious enough to warrant a substantive response to clarify or complete the record; or

c) The comment raises a relevant issue that was not previously addressed or considered by the NRC.

2) The comment proposes a change or an addition to the rule, and it is apparent that the rule would be ineffective or unacceptable without incorporation of the change or addition.

3) The comment causes the NRC to make a change (other than editorial) to the rule.

For a more detailed discussion of the proposed rule changes and associated analyses, see the direct final rule published in the Rules and Regulations section of this issue of the *Federal Register*.

III. Background

Section 218(a) of the Nuclear Waste Policy Act of 1982, as amended, states that "[t]he Secretary [of the Department of Energy] shall establish a demonstration program, in cooperation with the private sector, for the dry storage of spent nuclear fuel at civilian nuclear power reactor sites, with the objective of establishing one or more technologies that the [Nuclear Regulatory] Commission may, by rule, approve for use at the sites of civilian nuclear power reactors without, to the maximum extent practicable, the need for additional site-specific approvals by the Commission." Section 133 of the Nuclear Waste Policy Act states, in part, that "[t]he Commission shall, by rule, establish procedures for

the licensing of any technology approved by the Commission under Section 219(a) [sic: 218(a)] for use at the site of any civilian nuclear power reactor."

To implement this mandate, the Commission approved dry storage of spent nuclear fuel in NRC-approved casks under a general license by publishing a final rule that added a new subpart K in part 72 of title 10 of the *Code of Federal Regulations* (10 CFR) entitled "General License for Storage of Spent Fuel at Power Reactor Sites" (55 FR 29181, July 18, 1990). This rule also established a new subpart L in 10 CFR part 72 entitled "Approval of Spent Fuel Storage Casks," which contains procedures and criteria for obtaining NRC approval of spent fuel storage cask designs and for the renewal of the cask design approval. The NRC subsequently issued a final rule on May 1, 2000 (65 FR 25241) that approved the HI-STORM 100 Cask System design and added it to the list of NRC-approved cask designs in § 72.214 as Certificate of Compliance No. 1014. On August 28, 2007 (72 FR 49561), the NRC amended the scope of the general licenses issued under 10 CFR 72.210 to include the storage of spent fuel in an independent spent fuel storage installation at power reactor sites to persons authorized to possess or operate nuclear power reactors under 10 CFR part 52. On February 16, 2011 (76 FR 8872), the NRC amended subparts K and L in 10 CFR part 72, to extend and clarify the term limits for certificates of compliance and revised the conditions for spent fuel storage casks renewals, including adding requirements for the safety analysis report to include time-limited aging analyses and a description of aging management programs. The NRC also clarified the terminology used in the regulations to use "renewal" rather than "reapproval" to better reflect that extending the term of a currently approved cask design is based on the cask design standards in effect at the time the certificate of compliance was approved rather than current standards.

IV. Plain Writing

The Plain Writing Act of 2010 (Pub. L. 111-274) requires Federal agencies to

write documents in a clear, concise, well-organized manner. The NRC has written this document to be consistent with the Plain Writing Act as well as the Presidential Memorandum, “Plain Language in Government Writing,” published June 10, 1998 (63 FR 31885). The NRC requests comment on the proposed rule with respect to clarity and effectiveness of the language used.

V. Availability of Documents

The documents identified in the following table are available to interested persons as indicated.

DOCUMENT	ADAMS ACCESSION NO. / *FEDERAL REGISTER* CITATION
Proposed Certificates of Compliance and Proposed Technical Specifications	
Proposed Renewed Certificate of Compliance No. 1014 (Amendment No. 0)	ML22098A235
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 0	ML22098A236
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 0	ML22098A237
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 1	ML22098A238
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 1	ML22098A239
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 1	ML22098A240
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 2	ML22098A241
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-	ML22098A242

STORM 100 Cask System Amendment No. 2	
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 2	ML22098A243
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 3	ML22098A244
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 3	ML22098A245
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 3	ML22098A246
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 4	ML22098A247
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 4	ML22098A248
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 4	ML22098A249
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 5	ML22098A250
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 5	ML22098A251
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 5	ML22098A252
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 6	ML22098A253
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 6	ML22098A254
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 6	ML22098A255

Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 7	ML22098A256
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 7	ML22098A257
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 7	ML22098A258
Proposed Renewed Certificate of Compliance No. 1014 Appendix A-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 7	ML22098A259
Proposed Renewed Certificate of Compliance No. 1014 Appendix B-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 7	ML22098A260
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 8, Revision 1	ML22098A261
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 8, Revision 1	ML22098A262
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 8, Revision 1	ML22098A263
Proposed Renewed Certificate of Compliance No. 1014 Appendix A-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 8, Revision 1	ML22098A264
Proposed Renewed Certificate of Compliance No. 1014 Appendix B-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 8, Revision 1	ML22098A265
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 9, Revision 1	ML22098A266
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 9, Revision 1	ML22098A267
Proposed Renewed Certificate of Compliance No. 1014 Appendix B:	ML22098A268

Technical Specifications for the HI-STORM 100 Cask System Amendment No. 9, Revision 1	
Proposed Renewed Certificate of Compliance No. 1014 Appendix A-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 9, Revision 1	ML22098A269
Proposed Renewed Certificate of Compliance No. 1014 Appendix B-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 9, Revision 1	ML22098A270
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 10	ML22098A271
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 10	ML22098A272
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 10	ML22098A273
Proposed Renewed Certificate of Compliance No. 1014 Appendix A-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 10	ML22098A274
Proposed Renewed Certificate of Compliance No. 1014 Appendix B-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 10	ML22098A275
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 11	ML22098A276
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 11	ML22098A277
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 11	ML22098A278
Proposed Renewed Certificate of Compliance No. 1014 Appendix A-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 11	ML22098A279

Proposed Renewed Certificate of Compliance No. 1014 Appendix B-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 11	ML22098A280
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 12	ML22098A281
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 12	ML22098A282
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 12	ML22098A283
Proposed Renewed Certificate of Compliance No. 1014 Appendix A-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 12	ML22098A284
Proposed Renewed Certificate of Compliance No. 1014 Appendix B-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 12	ML22098A285
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 13	ML22098A286
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 13	ML22098A287
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 13	ML22098A288
Proposed Renewed Certificate of Compliance No. 1014 Appendix A-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 13	ML22098A289
Proposed Renewed Certificate of Compliance No. 1014 Appendix B-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 13	ML22098A290
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 14	ML22098A291

Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 14	ML22098A292
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 14	ML22098A293
Proposed Renewed Certificate of Compliance No. 1014 Appendix A-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 14	ML22098A294
Proposed Renewed Certificate of Compliance No. 1014 Appendix B-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 14	ML22098A295
Proposed Renewed Certificate of Compliance No. 1014, Amendment No. 15	ML22098A296
Proposed Renewed Certificate of Compliance No. 1014 Appendix A: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 15	ML22098A297
Proposed Renewed Certificate of Compliance No. 1014 Appendix B: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 15	ML22098A298
Proposed Renewed Certificate of Compliance No. 1014 Appendix A-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 15	ML22098A299
Proposed Renewed Certificate of Compliance No. 1014 Appendix B-100U: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 15	ML22098A300
Proposed Renewed Certificate of Compliance No. 1014 Appendix C: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 15	ML22098A301
Proposed Renewed Certificate of Compliance No. 1014 Appendix D: Technical Specifications for the HI-STORM 100 Cask System Amendment No. 15	ML22098A302
Preliminary Safety Evaluation Report	

Preliminary Safety Evaluation Report for the HI-STORM 100 Cask System: Certificate of Compliance No. 1014 Renewal Docket No. 72-1014	ML22098A303
Environmental Documents	
Environmental Assessment for Proposed Rule Entitled, "Storage of Spent Nuclear Fuel in NRC-Approved Storage Casks at Nuclear Power Reactor Sites." (1989)	ML051230231
“Environmental Assessment for the Holtec International HI-STORM 100U Underground Cask System” (2009)	ML091060766
“Environmental Assessment and Finding of No Significant Impact for the Final Rule Amending 10 CFR Part 72 License and Certificate of Compliance Terms” (2010)	ML100710441
Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel: Final Report (NUREG-2157, Volumes 1 and 2) (2014)	ML14198A440 (package)
“Storage of Spent Fuel In NRC-Approved Storage Casks at Power Reactor Sites” Final Rule (July 18, 1990)	55 FR 29181
“List of Approved Spent Fuel Storage Casks: HI–STORM 100 Revision 7” (October 13, 2009)	74 FR 52387
“License and Certificate of Compliance Terms” (February 16, 2011)	76 FR 8876
Holtec International, HI-STORM 100 Renewal Application Documents	
“Holtec International HI-STORM 100 Storage Certificate of Compliance Renewal Application.” Holtec Letter 5014890.	ML20049A081 (package)
“Holtec International, Submittal of RAI Responses on HI-STORM 100 License Renewal.” Holtec Letter 5014911.	ML20290A819 (package)
“Holtec International, Submittal of RAI Responses on HI-STORM 100 License Renewal [submittal of report HI-2002396, Revision 5].” Holtec Letter 5014912.	ML20303A254 (package)
“Holtec International, Submittal of RAI Clarification Responses on HI-STORM 100 License Renewal.” Holtec Letter 5014922.	ML21109A367 (package)
“Holtec International, Submittal of RAI Clarification Responses on HI-STORM 100 License Renewal—Updated Attachment.” Holtec Letter 5014923.	ML21113A201 (package)
Certificate of Compliance Renewal Application for the HI-STORM 100 Dry Storage System: Certificate of Compliance No. 1014, Docket Number 72-1014	ML21113A203

Holtec International, HI-STORM 100 Final Safety Analysis Reports	
"Final Safety Analysis Report for the HI-STORM 100 Cask System." HI-2002444, Revision 18. (non-proprietary) (May 2019)	ML19150A405
"Final Safety Analysis Report for the HI-STORM 100 Cask System." HI-2002444, Revision 19. (non-proprietary) (April 2020)	ML20121A317
"Final Safety Analysis Report for the HI-STORM 100 Cask System." HI-2002444, Revision 20. (non-proprietary) (June 2020)	ML20167A018
Other Documents	
"Standard Review Plan for Renewal of Specific Licenses and Certificates of Compliance for Dry Storage of Spent Nuclear Fuel." NUREG-1927, Revision 1. Washington, DC. June 2016.	ML16179A148
"Managing Aging Processes in Storage (MAPS) Report." Final Report. NUREG-2214. Washington, DC. July 2019.	ML19214A111
"General License for Storage of Spent Fuel at Power Reactor Sites" (July 18, 1990)	55 FR 29181
"List of Approved Spent Fuel Storage Casks: Holtec HI-STORM 100 Addition" (May 1, 2000)	65 FR 25241
"License and Certificate of Compliance Terms" (February 16, 2011)	76 FR 8872
"Agreement State Program Policy Statement; Correction" (October 18, 2017)	82 FR 48535
Nuclear Energy Institute NEI 14-03, Revision 2, "Format, Content and Implementation Guidance for Dry Cask Storage Operations-Based Aging Management," (2016)	ML16356A210
Regulatory Guide 3.76, Revision 0, "Implementation of Aging Management Requirements for Spent Fuel Storage Renewals." July 2021.	ML21098A022

The NRC may post materials related to this document, including public comments, on the Federal rulemaking website at https://www.regulations.gov under Docket ID NRC-2022-0109.

Dated: January 31, 2023.

For the Nuclear Regulatory Commission.

Catherine Haney,
Acting Executive Director for Operations.

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